Work Order ID 56566

Monday, March 01, 2010 2:43:44 PM



Page 1

Item ID:

D205-634-041

Accept

Setup Start



Revision ID:

Item Name: Replacement Skidtube

Required Date: 3/15/2010

Start Date:

Reference:

Approvals:

3/2/2010

Start Qty: 1.00

Req'd Qty: 1.00



Cust Item ID: Customer:

Run

Start

Stop



QC:

Process Plan:

Date: 10-3-0

Date:

Tooling:

Date: Date:

Stop



Sequence ID/ Work Center ID

Draw Nbr

Operation Description

Revision Nbr

Set Up/ **Run Hours**

SPC (Y/N):

Draw Number Draw Plan Rev. Code

Reject Accept Qty Qty

Reject

Insp. Number Stamp

D2580

Rev D

100

DOCUMENT CONTROL

0.00

Document Control

Memo

Photocopy D205-634 bluefile & type labels per PPP D205-634-041 CHG002

110

CNC Bend 1

BENDING MACHINE - SKIDTUBES

Memo

0.00

CNC Delta 100 Bender

1-Bend as per program D2580.C on CNC Bender and Folio FT009

2-Cut tubes as per Dwg. D2580

Dart Ae	rospace Lt	d				1			1
W/O:			WORK ORDER CHANGES						
DATE	STEP	PR	OCEDURE CHAI	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approva QC Inspecto
						AF .			
Part No):	PAR #:	Fault Categ	gory:	NCR: Yes	No DQA	:	Date: _	
	Reso	olution:	Disposition	1:	QA: N/C C	losed:		Date: _	
NCR:			WORK ORDE	ER NON-CONFORMAN	CE (NC	R)			
DATE	STEP	Description of NC	Corrective Action Section B			Verifica	ation	Approval	Approva
	SIEP	Section A	Initial Chief Eng	Action Description Chief Eng			n C	Chief Eng	QC Inspecto
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Work Order ID 56566

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Page 2

Item ID:

D205-634-041

Revision ID:

Item Name:

Replacement Skidtube

Start Date:

3/2/2010

Required Date: 3/15/2010

Start Qty: 1.00 Req'd Qty: 1.00

Operation

Description



Accept



Setup Start

Stop



Cust Item ID: Customer:

Reference:

Approvals:

QC:

Process Plan:

Date: Date: Tooling:

SPC (Y/N):

Draw

Number

Date:

Draw

Rev.

Date:

Run

Reject

Qty

Start



Stop

Reject



Number Stamp

Insp.

Sequence ID/ Work Center ID

Skidtubes

Memo

Memo

1- Deburr ends

0.00

Set Up/

Run Hours

0.00

Skidtubes

2- C'sink holes as per dwg without cutting fluid

3- Prepare tube for welding, remove alodine as required.

4- Scribe batch number insied aft end of tube.

130

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

0.00

Plan

Code

Accept

Qty

Dart	Aerospace	Ltd
200		

W/O:				WO	RK ORDER CHANG	GES		\		. ' . '
DATE	STEP	PROCEDURE CHANGE				Ву	Da	te Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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			,				12			
Part No					gory:					
	R	esolution:		Disposition	1;	QA: N/C	Closed	:	Date:	
NCR:			:-	WORK ORDE	R NON-CONFORM	ANCE (N	CR)		9	
DATE	CTED	STEP Description of NC Section A		Corrective Action Section B			Ver		Approval	Approval
DATE	SILF			Initial Action Description Chief Eng Chief Eng		Sig Da	n &	Section C	Chief Eng	QC Inspector
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Work Order ID 56566

Monday, March 01, 2010 2:43:44 PM



Page 3

Item ID:

D205-634-041

Accept

Setup Start

Revision ID:

Start Date:

Item Name: Replacement Skidtube

3/2/2010

Required Date: 3/15/2010

Start Qty: 1.00

Req'd Qty: 1.00

Cust Item ID: Customer:

> Run Start

> > Stop

Stop

Reference: Approvals:

Process Plan:

QC:

Date: Date: Tooling:

0.00

SPC (Y/N):

Date: Date:

Sequence ID/

Work Center ID 140

Skidtubes Skidtubes

Operation Description

Set Up/ Run Hours Draw Number Draw Plan Rev. Code

Reject Accept Qty

Qty

Reject

Insp. Number Stamp

Memo

0.00

1-Weld step D2576 as per Dwg. D2580 and QSI 004

A/R Aluminum Rod

m/13207

2-Prep per QSI 005 and weld crossbolt spacers D2579 as per Dwg. D2580, QSI

For D2579 spacers, weld one side, pass 3/8" drill, weld other side, pass 3/8" drill

A/R Aluminum Rod

3-Grind welds as per Dwg D2580 Grind flush ridge made from bending

4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64", adjust stopper not to hit web.Deburr

5-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2580. Deburr holes

6-Drill pilot holes for aft cap using DT 8215Open holes to 0.208". Deburr

7-Drill pilot holes for Tow ring using DT8091, open to .640"and Deburr

BE 10/03/04

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES										
DATE	STEP	PROCEDURE CHANGE					Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
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Part No	Res	P	AR #:	Fault Cate	gory:	NO	CR: Yes	No DQA	\:			
	Re	solution:		Dispositio	n:	Q.	A: N/C C	losed:		Date:		
NCR:			V	VORK ORD	ER NON-CONF	ORMANC	E (NCF	₹)			34	
DATE	STEP	Description	of NC		Corrective Action	Section B	0:	Verific	ation	Approval	Approval	
	0.2	Section	A	Initial Chief Eng	Action Desci Chief Eng		Sign and Date		on C	Chief Eng	QC Inspector	
ý	-3"											
						10 mg						

Work Order ID 56566

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Item ID:

D205-634-041

Revision ID:

Item Name:

Replacement Skidtube

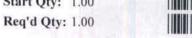
Start Date:

3/2/2010

OC:

Required Date: 3/15/2010

Start Oty: 1.00



Accept



Setup Start

Stop

Cust Item ID:

Customer:

Reference: Approvals:

Process Plan:

Date:

Date:

Tooling:

SPC (Y/N):

Date:

Date:

Run

Start

Stop

Sequence ID/ Work Center ID

150

Quality Control

Operation Description

QC10- Inspect visual per QSI004- ground welds

Memo

Set Up/ Run Hours Draw Number Draw Plan Rev. Code

Accept Qty

Reject Qty

Reject Insp. Number Stamp

0.00

160

Quality Control

QC5- Inspect part completeness to step on W/O

170

HandFinish

Hand Finishing

Pressure Wash per QSI005 4.3

Memo

0.00

turessure - wast

Memo

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch and leave fwd cap out of solution.



Dart Aerospace Ltd WORK ORDER CHANGES W/O: Approval Approval DATE STEP PROCEDURE CHANGE By Date Qty Chief Eng / QC Inspector Prod Mgr Part No: ______ PAR #: ____ Fault Category: _____ NCR: Yes No DQA: ___ Date: ___ Resolution: QA: N/C Closed: Date: WORK ORDER NON-CONFORMANCE (NCR) NCR: **Corrective Action** Section B Description of NC Verification Approval Approval DATE STEP **Action Description** Sign & Initial Section A Section C Chief Eng QC Inspector Date Chief Eng Chief Eng

Work Order ID 56566

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Item ID:

D205-634-041

Revision ID:

Item Name:

Replacement Skidtube

Start Date:

3/2/2010

QC:

Required Date: 3/15/2010 Req'd Qty: 1.00

Reference:

Start Qty: 1.00



Accept



Setup Start

Stop



Cust Item ID:

Customer:

Draw

Number

Approvals:

Process Plan:

Date:

Date:

Tooling:

SPC (Y/N):

Date:

Draw

Rev.

Date:

Run

Start

Reject

Stop



Number Stamp

Insp.

Sequence ID/ Work Center ID

180

Powdercoat

Powder Coating

Operation Description

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

1113170

Memo

START TIME:

1:00 pm OVEN TEMPERATURE: 3209-FINISH TIME:

Set Up/ Run Hours

M 10/03/09

Qty

Accept

Plan

Code

Reject

Qty

190

Quality Control

QC3- Inspect Part Finish

Memo

0.00

BR 10-3-10

Dart Aerospace Ltd W/O: WORK ORDER CHANGES Approval Approval DATE STEP PROCEDURE CHANGE By Qty Date Chief Eng / QC Inspector Prod Mgr Part No: ______ PAR #: ____ Fault Category: _____ NCR: Yes No DQA: ___ Date: ___ Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: ____ WORK ORDER NON-CONFORMANCE (NCR) NCR: Corrective Action Section B Description of NC Verification Approval Approval DATE STEP **Action Description** Sign & Initial Section A QC Inspector Section C Chief Eng Date Chief Eng Chief Eng

Work Order ID 56566

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Item ID:

D205-634-041

Accept

Setup Start

Stop



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

3/2/2010

QC:

Start Qty: 1.00

Required Date: 3/15/2010

Reg'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date: Date: Tooling:

SPC (Y/N):

Date:

Date:

Run

Start



Stop



Sequence ID/ Work Center ID

200

HandFinish

Hand Finishing

Operation Description

Memo

Set Up/ Run Hours Draw Number

Plan Draw Rev. Code

Accept Qty

Reject Otv

Reject Insp. Number Stamp

0.00

0.00

1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates

A/R DDD Sikaflex-291

Sikaflex expire date: 10/08

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with

Sikaflex. Clean excess adhesive

A/R Sikaflex-291 Sikaflex expire date:

5-Wing Walk as per Dwg D2580 and QSI 005 4.4

Bf 10-3-10. D.

Dart Aerospace Ltd W/O: WORK ORDER CHANGES Approval Approval STEP DATE PROCEDURE CHANGE By Date Qty Chief Eng / QC Inspector Prod Mgr Part No: ______ PAR #: ____ Fault Category: _____ NCR: Yes No DQA: ___ Date: ____ Resolution: _____ Disposition: _____ QA: N/C Closed: ____ Date: _____ WORK ORDER NON-CONFORMANCE (NCR) NCR: **Corrective Action** Section B Description of NC Verification Approval Approval DATE STEP Sign & **Action Description** Initial Section A QC Inspector Section C Chief Eng Date Chief Eng Chief Eng

Work Order ID 56566

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Item ID:

D205-634-041

Accept

Setup

Start



Revision ID:

Item Name: Replacement Skidtube

Start Date:

3/2/2010

Start Qty: 1.00

Required Date: 3/15/2010

Req'd Qty: 1.00

Cust Item ID: Customer:

Reference: Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



OC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/ Work Center ID

210

Quality Control

Operation Description

QC5- Inspect part completeness to step on W/O

Set Up/

Run Hours

Draw Number Draw Plan Rev. Code

Accept Qty

Reject Qty

Reject Insp. Number Stamp

0.00 0.00

Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for

Foreign objects per OSI 024

220

Packaging

Packaging

Packaging

Memo

Identify and pack for shipping as per PPPD205-634-041

Location: PPP Rev

230

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

0.00

0.00

10/03/16 Af

TEP	PRO	OCEDURE CHAN	NGE	Ву	Date Q	ty Approval Chief Eng / Prod Mgr	Approva QC Inspecto
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TEP		Initial Chief Eng	Action Description Chief Eng		Section C		Approva QC Inspecto
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_		Resolution: Description of NC	Resolution: Disposition WORK ORDE TEP Description of NC Section A Initial	Disposition: ONTION	Resolution: Disposition: QA: N/C C WORK ORDER NON-CONFORMANCE (NCF WORK ORDER NON-CONFORMANCE (NCF Corrective Action Section B Initial Action Description Sign 8	Resolution: Disposition: QA: N/C Closed: WORK ORDER NON-CONFORMANCE (NCR) TEP Description of NC Section A Corrective Action Section B Verification Section Correction Sign & Section Correction Correction Sign & Section Correction Correction Sign & Section Correction Correc	Resolution: Disposition: QA: N/C Closed: Date:

Monday, March 01, 2010 2:43:43 PM

Work Order ID: 56566

Parent Item:

D205-634-041

Parent Item Name: Replacement Skidtube

Comments:

IPP Rev:N \Box 02.08.28 \Box FP was QC5 in Step 27; Added QC5 to Step 30 \Box KJ

IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD IPP Rev. O 06.02.28 Added paperwork EC

Manufactured

IPP Rev:P 07-07-09

SS Wearplates & Gaskets

Start Date: 3/2/2010

Start Qty: 1.00

Required Date: 3/15/2010

Required Qty: 1.00

D2580-1

205 Skidtube bent detail

Manufactured

110

Each

Loc Qty

4.0000

1,0000

Warehouse Location

Main Warehouse

54541

56123

140

Loc Code

2

2

Each

132,0000 1,0000

Loc Code

D2576-3

Step (maching detail)

Warehouse Loc Oty Location Main Warehouse ST 132 46661 85 52215 47

BE 10-03-04

Page 1

Dart Aerospace Ltd

		370									
Reso				W	ORK ORDER CHANG	GES					
DATE	STEP		PRO	OCEDURE CHA	NGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
											-1
Resolution		PAR #:	Fault Cate	gory:	NCR	Yes	No DQ	A:	_ Date: _		
	Reso	olution:		Dispositio	n:	QA:	WC Clo	sed:		Date:	-1
NCR:				WORK ORD	ER NON-CONFORM	IANCE	(NCR)			
DATE	CTED	Descr	iption of NC		Corrective Action Section B			Verification Section C		Approval Chief Eng	Approval
	STEP Desc		Section A	Initial Chief Eng	Action Description Chief Eng	ion Sign & Date					QC Inspector

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Page 2

Work Order ID: 56566

Parent Item:

D205-634-041

Parent Item Name: Replacement Skidtube

Comments:

IPP Rev:N \square 02.08.28 \square FP was QC5 in Step 27; Added QC5 to Step 30 \square KJ

IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD

IPP Rev. O 06.02.28 Added paperwork EC

IPP Rev:P 07-07-09 SS Wearplates & Gaskets

Start Date: 3/2/2010 Start Qty: 1.00

Required Date: 3/15/2010

Required Qty: 1.00

20 BE 10/03/04

D2579

Manufactured

51315

JLM

140

Each

216.0000 20.0000



Crossbolt Spacer

Warehouse Location	Loc Qty	Loc Code
Main Warehouse		
LG	94	
51525	4	
53780	3	
54543	18	
56145	69	
Main Warehouse		
ST	122	
43988	4	
46434	4	
46956	2	
47797	9	
48272	2	
51314	71	

30

Dart Aerospace Ltd

W/O:				W	ORK ORDER CHANG	ES				
DATE	STEP		PRO	OCEDURE CHA	ANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No	Resolution				egory:					
	Re	esolution:		Disposition	on:	QA: N/C CI	osed:		Date:	
NCR:				WORK ORD	ER NON-CONFORM	ANCE (NCF	₹)		24	
DATE	CTED	Description of NC Section A				ion B	Verific	ation	Approval	Approval
	STEP			Initial Action Description Chief Eng Chief Eng		Sign 8 Date	Section C		Chief Eng	QC Inspector
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	3				•					

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Work Order ID: 56566

Parent Item:

D205-634-041

Parent Item Name:

Replacement Skidtube

Comments:

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IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD

IPP Rev. O 06.02.28 Added paperwork EC

IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Start Date: 3/2/2010

Required Date: 3/15/2010 Start Qty: 1.00

Required Qty: 1.00

D2855

Manufactured

200

Each

149.0000 1.0000

Cap

Loc Qty	Loc Code	
149		
1		
1		
37		
110		
	149 1 1 37	149 1 1 37

AN3-5A

Bolt



Purchased

Each

1,431,000 2,0000



Warehouse Loc Oty Loc Code Location Main Warehouse ST 1431 188 105057 v 1243

2. BL 10-3-11.

Dart Aerospace Ltd W/O: **WORK ORDER CHANGES** Approval Approval PROCEDURE CHANGE DATE STEP By Qty Date Chief Eng / QC Inspector Prod Mgr Part No: ______ PAR #: ____ Fault Category: _____ NCR: Yes No DQA: ___ Date: ___ Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: ____ WORK ORDER NON-CONFORMANCE (NCR) NCR: Corrective Action Section B Description of NC Verification Approval Approval DATE STEP **Action Description** Sign & Initial Section A QC Inspector Section C Chief Eng Chief Eng Date Chief Eng

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Work Order ID: 56566

Parent Item: D205-634-041

Parent Item Name:

Replacement Skidtube

Comments:

IPP Rev:N□02.08.28□FP was QC5 in Step 27; Added QC5 to Step 30□KJ

IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD

IPP Rev. O 06.02.28 Added paperwork EC

IPP Rev:P 07-07-09

Start Date: 3/2/2010

Start Qty: 1.00

Required Date: 3/15/2010

Required Qty: 1.00

AN960JD10L

SS Wearplates & Gaskets No

200

Each

3,197,000 2,0000

Washer

Warehouse Loc Qtv Loc Code Location Main Warehouse ST 3197 101291 16 105793 49 110985 3132 200 Each

2 13/10-3-11 986.0000 50.0000

ALS7-1032-130

Insert

Purchased

Purchased

Warehouse

Location

Loc Oty

Loc Code

ALS4-1032-130

Main Warehouse 986 108606 52 111529 130 111779 34 112772 11 113238 759 50. Bl10-03-11

Dart Aerospace Ltd

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W/O:				WC	RK ORDER CHANG	ES				1. 1
DATE	STEP		PRO	OCEDURE CHAI	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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		9 6								
Part No	•		PAR #:	Fault Cate	gory:	NCR: Yes	No DQ	A:	_ Date: _	
	R	esolution:		Disposition	n:	QA: N/C Clo	sed:		_ Date: _	
NCR:				WORK ORDI	ER NON-CONFORMA	NCE (NCR)			
DATE	STEP	Description of NC Section A		Corrective Action Section B			Verifi	cation	Approval	Approval
DATE	SILF			Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C		Chief Eng	QC Inspector
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Work Order ID: 56566

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

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IPP Rev:N \square 02.08.28 \square FP was QC5 in Step 27; Added QC5 to Step 30 \square KJ

IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD IPP Rev. O 06.02.28 Added paperwork EC

IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM



Start Date: 3/2/2010

Start Qty: 1.00

Required Date: 3/15/2010

Required Qty: 1.00

AN3C4A

Purchased

No

200

Each

Each

1,033.000 50.0000



	Warehouse	1	oc Qty	Loc Code	
	Location				
	Main Warehouse				
	ST 11410 3		1033		
	112314		13		
	112720		12		
	112724		3		
	112829		1		
	112991		2		
	113121		64		
	113226		344		
	113644		394		
	113749		200		
No		200	Each	388 0000	50.000

388.0000 50.0000

AN960C10L

NAS149C0332R

Purchased

Warehouse Location	Loc Qty	Loc Code
OFFSHORE /13691		
FG / C) C/	100	
103585	100	
Main Warehouse		
ST	288	
112116	128	
112612	160	

80 BL10-3-11

50 bl 10-3-11

Dart Aerospace Ltd W/O: WORK ORDER CHANGES Approval Approval DATE STEP PROCEDURE CHANGE By Qty Chief Eng / Date QC Inspector Prod Mgr Part No: ______ PAR #: ____ Fault Category: _____ NCR: Yes No DQA: ___ Date: ____ Resolution: QA: N/C Closed: Date: WORK ORDER NON-CONFORMANCE (NCR) NCR: Corrective Action Section B Description of NC Verification Approval Approval DATE STEP Sign & **Action Description** Initial Section A Section C Chief Eng QC Inspector Chief Eng Chief Eng Date

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Work Order ID: 56566

Parent Item:

D205-634-041

Parent Item Name:

Replacement Skidtube

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IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD

IPP Rev. O 06.02.28 Added paperwork EC

IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM



Start Date: 3/2/2010

Start Qty: 1.00

Required Date: 3/15/2010

Required Qty: 1.00

D3566-13

Manufactured

200

Each

79,0000

1.0000

Gasket

Warehouse	Lo	c Qty	Loc Code	
Location				
Main Warehouse				
FP		77		
53461		77		
Main Warehouse				
ST		2		
45717		1		
50265		1		
	200	Fach	31,0000	1

D3566-5

Gasket

Manufactured

1.0000

Warehouse	Loc Oty	Loc Code
Location		
Main Warehouse		
FP19	27	
55026	15	
55335	12	
Main Warehouse		
ST	4	
36113	1	
46186	1	
47318	1	
51260	1	

1 8/10-3-11.

Dart Aerospace Ltd W/O: **WORK ORDER CHANGES** Approval Approval DATE STEP PROCEDURE CHANGE By Qty Date Chief Eng / QC Inspector Prod Mgr Part No: ______ PAR #: ____ Fault Category: _____ NCR: Yes No DQA: ___ Date: ____ Resolution: _____ Disposition: _____ QA: N/C Closed: ____ Date: ____ WORK ORDER NON-CONFORMANCE (NCR) NCR: Corrective Action Section B Description of NC Verification Approval Approval DATE STEP Sign & **Action Description** Initial Section A QC Inspector Section C Chief Eng Chief Eng Chief Eng Date

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Required Date: 3/15/2010

Required Qty: 1.00

2. Bl10-3-11

Bl103-11.

Work Order ID: 56566

Parent Item:

D205-634-041

Parent Item Name:

Replacement Skidtube

Comments:

IPP Rev:N□02.08.28□FP was QC5 in Step 27; Added QC5 to Step 30□KJ

IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD IPP Rev. O 06.02.28 Added paperwork EC

IPP Rev:P 07-07-09

SS Wearplates & Gaskets Manufactured

200

Each

33.0000 2.0000

Start Date: 3/2/2010

Start Qty: 1.00

D3566-1

Gasket

Warehouse	Loc Qty	Loc Code
Location		<u> </u>
Main Warehouse		
FP 56532	28	
52512	3	
54480	1	
55011	1	
55320	23	
Main Warehouse		
ST	.5	

D3564-11

Wearshoe

Manufactured

46349 51218 51259

200

Each

16.0000 1.0000

Warehouse Loc Qty Loc Code Location Main Warehouse FP19 14 52125 55332 12 Main Warehouse ST 45823 50112

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Shop Packet Print

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Dart Aerospace Ltd W/O: WORK ORDER CHANGES Approval Approval DATE STEP PROCEDURE CHANGE By Qty Date Chief Eng / QC Inspector Prod Mgr Part No: ______ PAR #: ____ Fault Category: _____ NCR: Yes No DQA: ___ Date: ____ Resolution: QA: N/C Closed: Date: WORK ORDER NON-CONFORMANCE (NCR) NCR: Corrective Action Section B Description of NC Verification Approval Approval STEP DATE **Action Description** Sign & Initial Section A QC Inspector Section C Chief Eng Chief Eng Date Chief Eng

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Work Order ID: 56566

Parent Item:

D205-634-041

Parent Item Name:

Replacement Skidtube

Comments:

IPP Rev:N □ 02.08.28 □ FP was QC5 in Step 27; Added QC5 to Step 30 □ KJ

IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD

IPP Rev. O 06.02.28 Added paperwork EC IPP Rev:P 07-07-09

SS Wearplates & Gaskets JLM



Start Date: 3/2/2010

Start Qty: 1.00

Required Date: 3/15/2010

Required Qty: 1.00

D3564-13

Manufactured

200

Each

19.0000

1.0000

Wearshoe

Warehouse	Loc Oty	Loc Code
Location		
Main Warehouse		
FP17 26985	7	
51611	7	
Main Warehouse		
ST	12	
45409	2	
46495	10	

D3564-9

Wearshoe

Manufactured

200

10 Each

25.0000 1.0000

Warehouse	Loc Qty	Loc Code
Location		
Main Warehouse		
FP19	23	
55025	11	
55334	12	
Main Warehouse		
ST	2	
44659	1	
45825	1	

1 BR 10-3-11

Dart Aerospace Ltd W/O: WORK ORDER CHANGES Approval Approval DATE STEP PROCEDURE CHANGE By Qty Date Chief Eng / QC Inspector Prod Mgr Part No: ______ PAR #: _____ Fault Category: ______ NCR: Yes No DQA: ____ Date: ____ Resolution: QA: N/C Closed: Date: WORK ORDER NON-CONFORMANCE (NCR) NCR: Corrective Action Section B Description of NC Verification Approval Approval STEP DATE Sign & **Action Description** Initial Section A Chief Eng QC Inspector Section C Chief Eng Date Chief Eng

Monday, March 01, 2010 2:43:43 PM

Page 9

Work Order ID: 56566

Parent Item: D205-634-041

Parent Item Name:

Replacement Skidtube

IPP Rev:N \square 02.08.28 \square FP was QC5 in Step 27; Added QC5 to Step 30 \square KJ IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD

IPP Rev. O 06.02.28 Added paperwork EC

IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

47433

Start Date: 3/2/2010

Start Qty: 1.00

Required Date: 3/15/2010

Required Qty: 1.00

D3564-5

Comments:

Manufactured No

200

Each

41.0000 1.0000



Wearshoe

Warehouse	Loc Qty	Loc Code
Location		
OFFSHORE		
FG	2	
34806	2	
Main Warehouse		
FP19	37	
51925	1	
54772	11	
55024	12	
55333	13	
Main Warehouse		
ST	2	
45824	1	

I DR 10-3-11.

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W/O:			WO	RK ORDER CHANG	ES				
DATE	STEP	PRO	OCEDURE CHAP	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
									1 7m 5
Part No	•	PAR #:	Fault Cate	gory:	NCR: Yes	No DQ	A:	_ Date: _	
	Resc	olution:	Disposition	1:	QA: N/C CI	osed:		Date:	
NCR:			WORK ORDE	ER NON-CONFORMA	ANCE (NCR	1)			
DATE	STEP	Description of NC	escription of NC Corrective Action Section B Verification A		Approval	Approval			
DAIL	SILF	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Sect	ion C	Chief Eng	QC Inspector
									1

Monday, March 01, 2010 2:43:43 PM

Work Order ID: 56566

D205-634-041

Parent Item Name:

Replacement Skidtube

Comments:

Parent Item:

IPP Rev:N \Box 02.08.28 \Box FP was QC5 in Step 27; Added QC5 to Step 30 \Box KJ

IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD

Manufactured

IPP Rev. O 06.02.28 Added paperwork EC

IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

200

Each

628.0000 16.0000

Start Date: 3/2/2010

Start Qty: 1.00

D2594-3 O-Ring, 205 Skidtube

Warehouse	Loc Qty	Loc Code
Location		
Main Warehouse		
FP	527	
51613	27	
55546	500	
Main Warehouse		
ST	101	
52562	101	

Page 10

Required Date: 3/15/2010

Required Qty: 1.00

Dart Aerospace Ltd W/O: WORK ORDER CHANGES . . . Approval Approval STEP DATE PROCEDURE CHANGE By Date Qty Chief Eng / QC Inspector Prod Mgr Part No: ______ PAR #: ____ Fault Category: _____ NCR: Yes No DQA: ___ Date: ___ Resolution: _____ Disposition: _____ QA: N/C Closed: ____ Date: ____ WORK ORDER NON-CONFORMANCE (NCR) NCR: Corrective Action Section B Description of NC Verification Approval Approval DATE STEP Sign & **Action Description** Initial QC Inspector Section A Section C Chief Eng Date Chief Eng Chief Eng

Monday, March 01, 2010 2:43:43 PM

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Work Order ID: 56566

Parent Item:

D205-634-041

Parent Item Name:

Replacement Skidtube

Comments:

D2594-1

IPP Rev:N□02.08.28□FP was QC5 in Step 27; Added QC5 to Step 30□KJ

IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD

SS Wearplates & Gaskets

46435 51527 51757 Start Date: 3/2/2010

Start Qty: 1.00

Required Date: 3/15/2010

Required Qty: 1.00

IPP Rev. O 06.02.28 Added paperwork EC

Manufactured

IPP Rev:P 07-07-09

JLM

200

Each

689,0000 16,0000



Plug, 205 Skidtube

Warehouse	Loc Qty	Loc Code
Location		
Main Warehouse		
FP	561	
54008	1	
54643 /	15	
55002	545	
Main Warehouse		
ST	128	
42221	16	
42807	92	
43884	3	

16 BR 10-3-11.

Dart Aerospace Ltd W/O: WORK ORDER CHANGES . . . Approval Approval STEP DATE PROCEDURE CHANGE By Qty Date Chief Eng / QC Inspector Prod Mar Part No: _______ PAR #: _____ Fault Category: ______ NCR: Yes No DQA: ____ Date: ____ Resolution: _____ Disposition: _____ QA: N/C Closed: ____ Date: ____ WORK ORDER NON-CONFORMANCE (NCR) NCR: **Corrective Action** Section B Description of NC Verification Approval Approval DATE STEP Sign & **Action Description** Initial Section A QC Inspector Section C Chief Eng Chief Eng Date Chief Eng



DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. D2580 SHEET	REV. D
DATE 07.02.27	7	TITLE 205 SKIDTUBE ASSEMBLY	SCALE
Α	96.09.16	NEW ISSUE	77.1
В	96.12.02	AS MANUFACTURED	
С	98.08.26	REDRAWN, INCLUDED DEO 9094/90	97
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	,



QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	Х	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

GENERAL NOTES:

- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING, ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:

SEE NOTES ON

PAGE 2 FOR D2580-041 AND

PAGE 3 FOR D2580-045

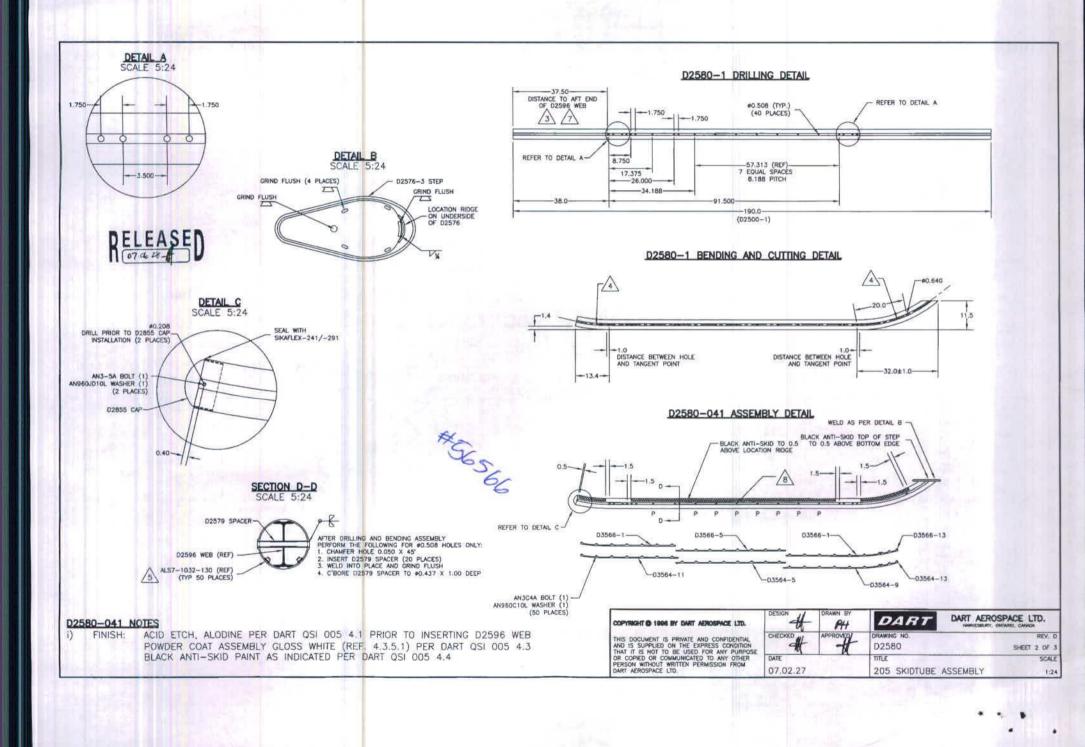
INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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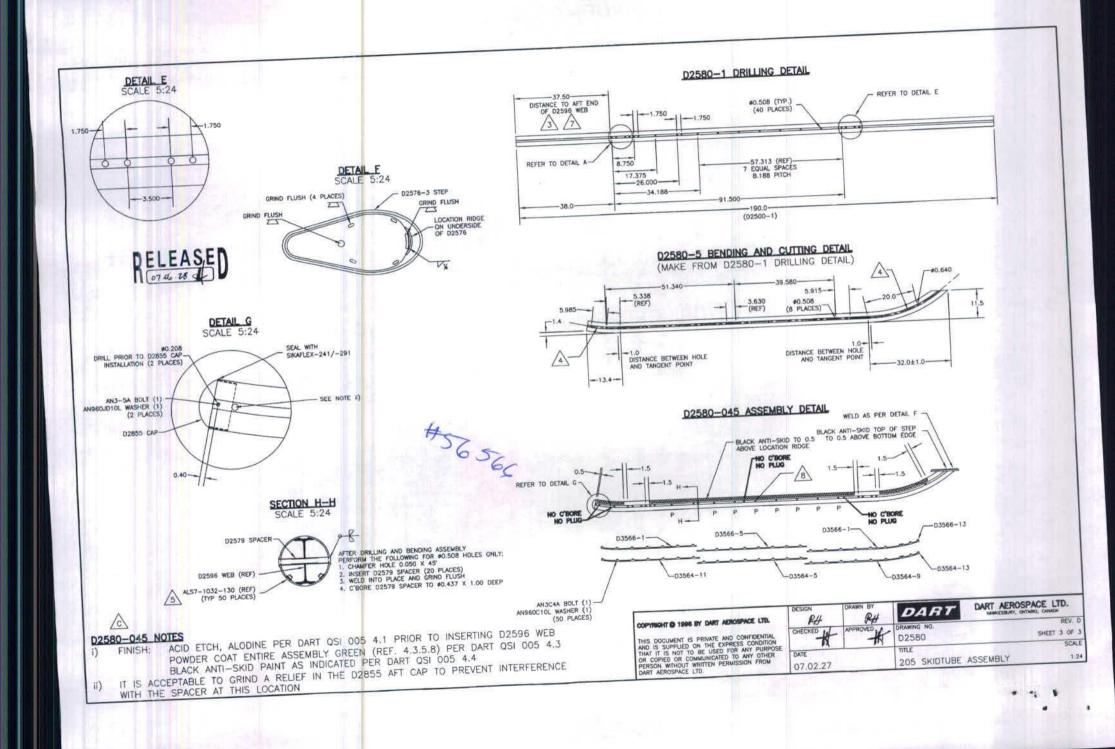
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Dart	Aerospace	Ltd
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W/O:		WORK ORDER CHANGES								
DATE	STEP	P PROCEDURE CHANGE			Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
Part No		PAR #:								
	H		Disposition: Q						Date:	
NCR:	Λ-		WORK ORDE	R NON-CONFORM	ANCE (NCF	()				
DATE	STEP	Description of NC Corrective Action			Section B Ve			Approval	Approval	
	0,12	Section A	Initial Chief Eng	Action Description Chief Eng	on Sign & Date		Section C		QC Inspector	
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W/O:			WO	RK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE By		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approva QC Inspecto	
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NCR:				ER NON-CONFORMANC					
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DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign 8 Date	Section		Approval Chief Eng	Approva QC Inspecto



Dart Aerospace Ltd

W/O:			WO	RK ORDER CHANG	GES				- 1			
DATE STEP		PROCEDURE CHANGE				Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector			
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NO. Adb

AWS D17.1.2001 QUALIFICATION TEST RECORD

Name: Darda Ellett

Job number: 50-184

Part number: D205 634 041

Description: 205 skid tube

Welding Process: Tigly Mig[]

Base materiel: Aluminian

Current: AC[] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: Penetration:	pass[fail[] pass[fail[]
UNACCEPTABLE	
Cracks: Undercut: Pin holes: Overlap (cold lap) Porosity (surface): Coloration:	pass[] fail[] pass[] fail[] pass[] fail[] pass[] fail[] pass[] fail[] pass[] fail[]
Qualifier of 1	Date of Test Coupon 10.02.23
Welder Barday Elliout	Date of Test Coupon 10-02-23

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

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